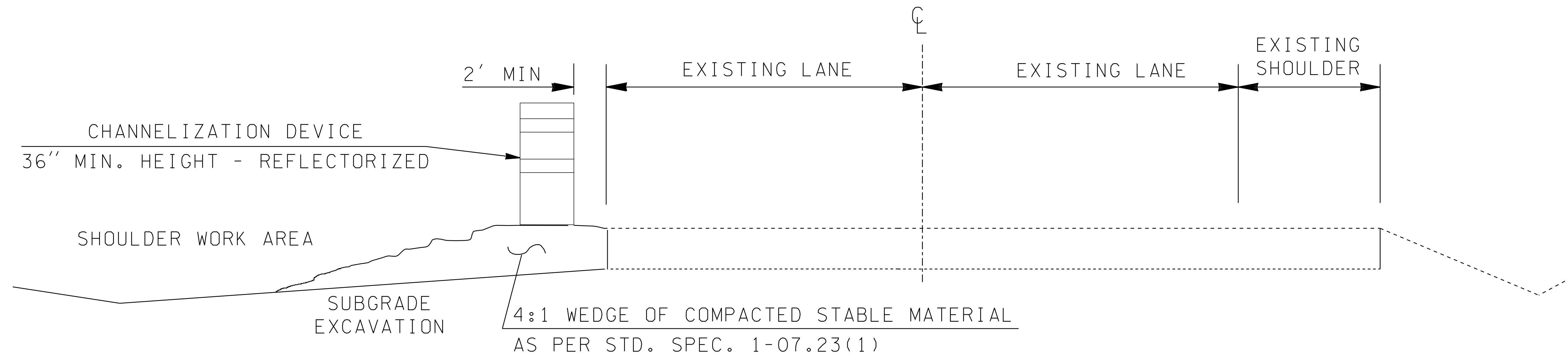
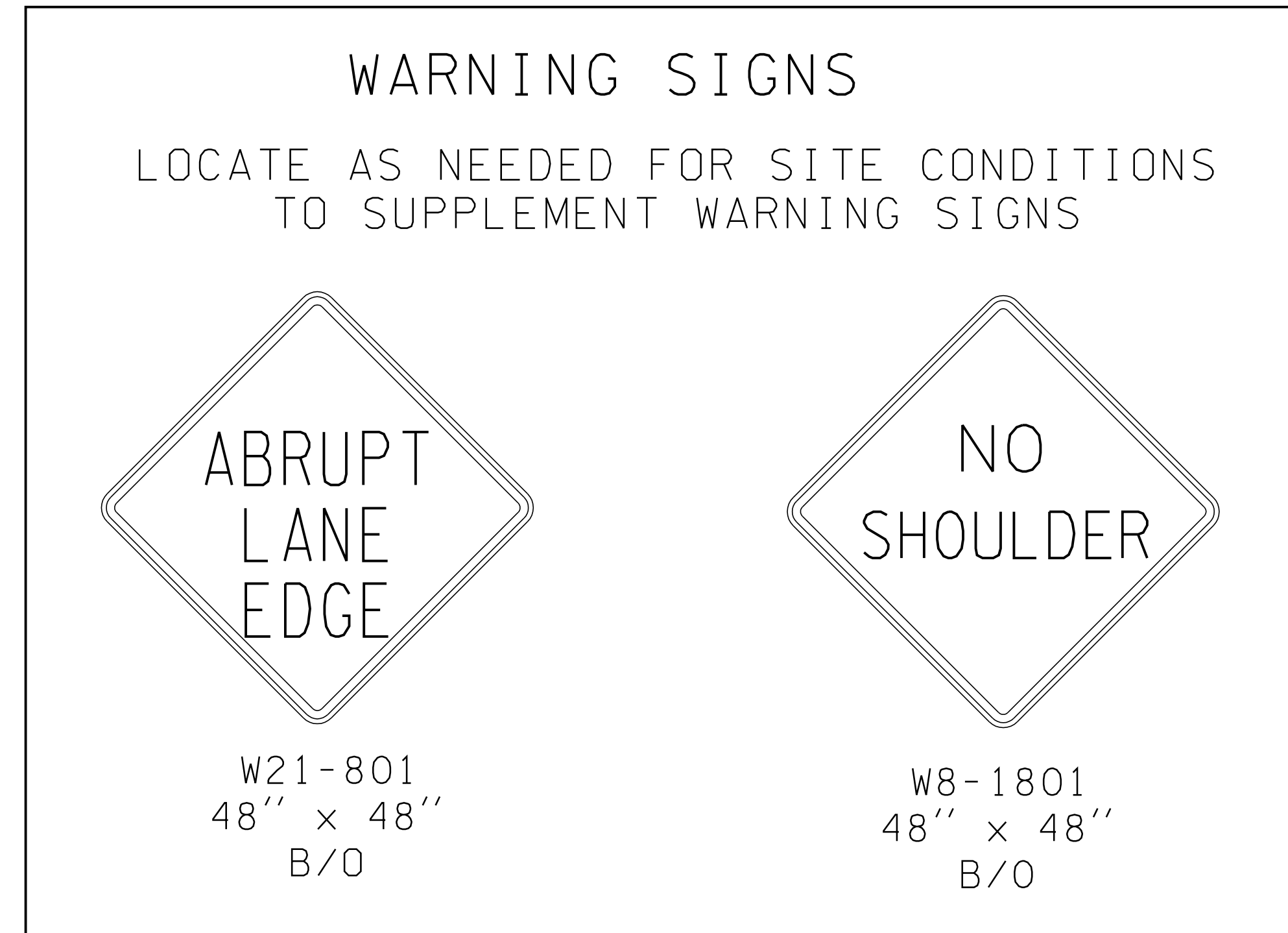


## **SPECIAL DETAILS AND TCP'S**

### **Traffic Control Details (TCD's) 1 to 5**

The following detail plans show the placement of signs, channelizing devices, and pavement markings, which are difficult to show on other traffic control plans or where additional guidance is necessary. A detail is also included as a guideline for signing a chip seal operation (TCD 4) and this includes an example reduced speed limit scenario. Be sure to include specific warning signs along with any reduction in the legal speed so the drivers have proper expectancy and know why they are being asked to slow down.



#### OPERATIONAL NOTES

1. SHOULDER EXCAVATION SHALL BE LIMITED TO ONE SIDE OF ROADWAY AT A TIME.
2. TYPE "C" STEADY BURN LIGHTS ARE RECOMMENDED ON CHANNELIZATION DEVICES TO PROVIDE ADDITIONAL DELINEATION.
3. REFER TO STD. SPEC. 1-07.23 FOR ADDITIONAL DETAILS ON THE MITIGATION REQUIREMENTS FOR DROP OFF PROTECTION.

SHOULDER WORK AREA PROTECTION  
NON-WORKING HOURS  
TCD 1

SIGN SPACING = X (feet) (1)		
Freeways & Expressways	55/70 MPH	1500'+- (OR AS PER MUTCD)
Rural Highways	60/65 MPH	800'+-
Rural Roads	45/55 MPH	500'+-
Rural Roads & Urban Arterials	35/40 MPH	350'+-
Rural Roads, Urban Arterials Residential & Business Districts	25/30 MPH	200'+- (2)
Urban Streets	25 MPH or LESS	100'+- (2)
ALL SIGNS ARE 48" x 48" BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.		

(1) All spacing may be adjusted to accommodate interchange ramps, at-grade intersections, and driveways.  
(2) This spacing may be reduced in urban areas to fit roadway conditions.

ABRUPT  
LANE  
EDGE

W21-801

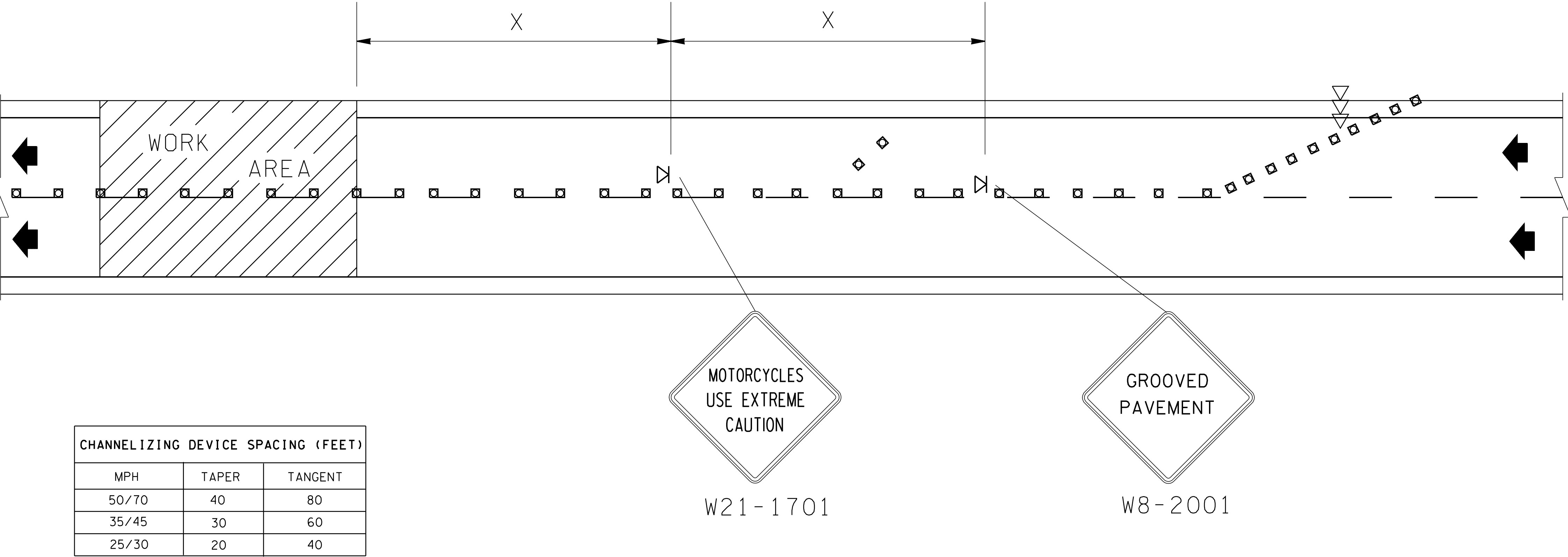
BUMP

W8-1

GROOVED  
PAVEMENT

W8-2001

FIELD LOCATE AS NEEDED THROUGH WORK AREA TO SUPPLEMENT  
MOTORCYCLE WARNING SIGN. (1 MILE INCREMENTS)



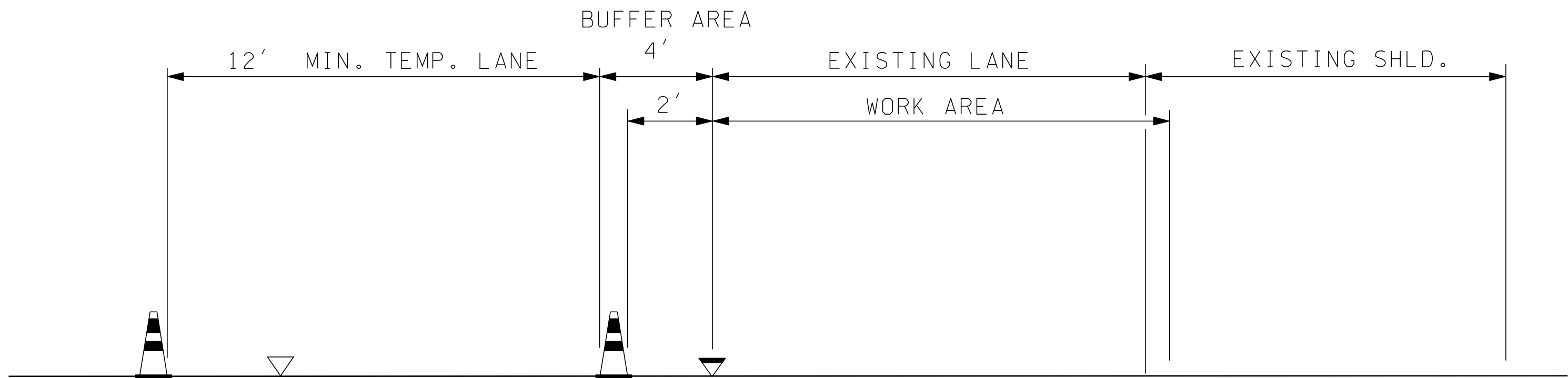
CHANNELIZING DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

NOTES

1. REFER TO TCP3 FOR TYPICAL LANE CLOSURE SIGNING DETAILS,  
DEVICE SPACING REQUIREMENTS AND LANE CLOSURE TAPER LENGTHS.

LEGEND

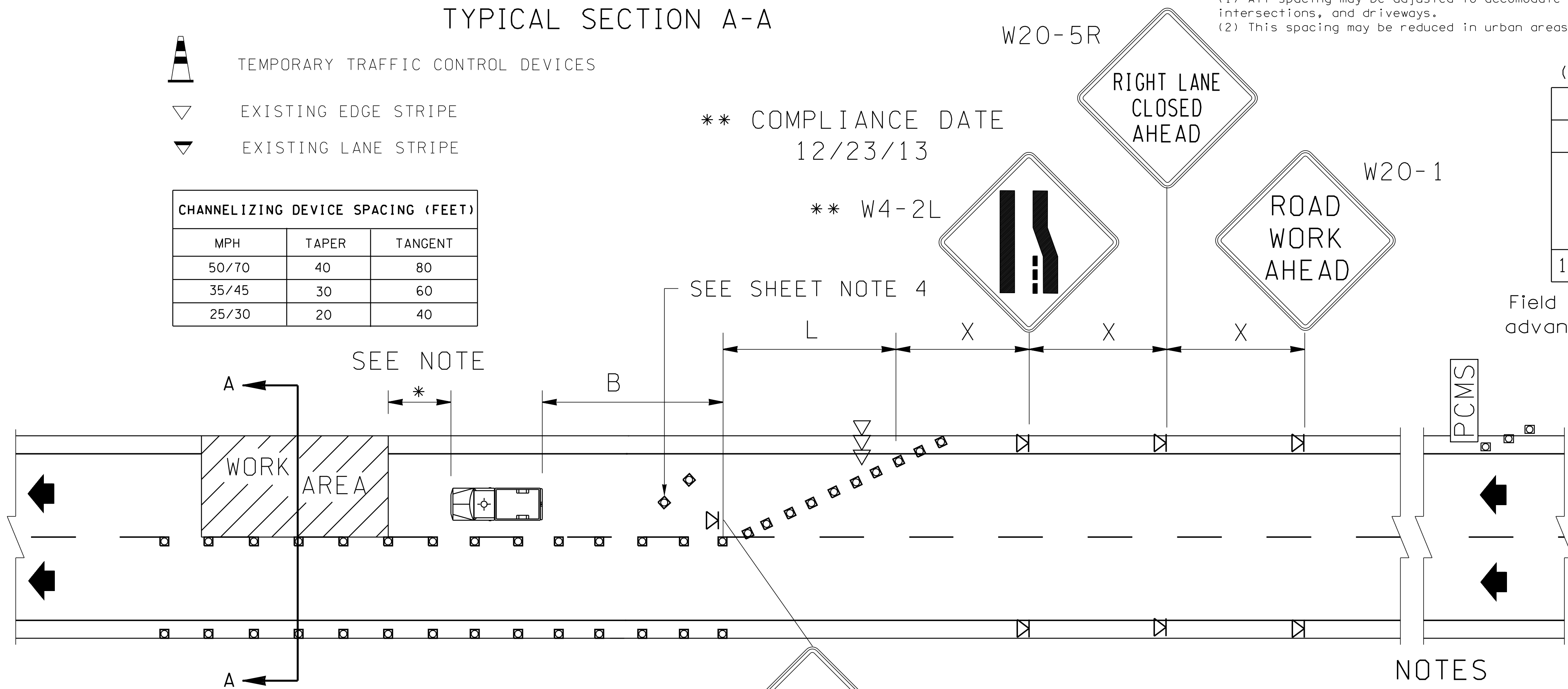
- SIGN LOCATION
- ARROW PANEL
- CHANNELIZING DEVICES



TYPICAL SECTION A-A

- TEMPORARY TRAFFIC CONTROL DEVICES
- EXISTING EDGE STRIPE
- EXISTING LANE STRIPE

CHANNELIZING DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40



(SAMPLE MESSAGE)

PCMS	
1	2
LANE CLOSED	1 MILE AHEAD
1.5 SEC	1.5 SEC

Field locate 1 mile +/- in advance of lane closure.

RECOMMEND ADVANCE NOTICE FOR ANY OVERWIDTH LOADS PRIOR TO LANE CLOSURE FOR ALTERNATE ROUTES IF APPLICABLE.

NOTES

1. PROTECTIVE VEHICLE RECOMMENDED-MAY BE A WORK VEHICLE.
2. CONTACT REGION TRAFFIC OFFICE FOR WORK HOUR RESTRICTIONS.
3. RECOMMEND EXTENDING DEVICE TAPER ACROSS SHOULDER.(L/3 TAPER)
4. USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000'+- (RECOMMENDED).
5. TRAFFIC SAFETY DRUMS RECOMMENDED FOR ALL TAPERS ON HIGH SPEED ROADWAYS. (SEE DEVICE MATRIX)
6. PCMS RECOMMENDED.

LEGEND

- WARNING BEACON - REQUIRED
- SIGN LOCATION
- ARROW PANEL
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE - RECOMMENDED
- PORTABLE CHANGEABLE MESSAGE SIGN

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
PROTECTIVE VEHICLE WITH TMA ROLL AHEAD DISTANCE										
TYPICAL PROTECTIVE VEHICLE TYPE WITH TMA		TYPICAL PROTECTIVE VEHICLE (WITH TMA) LOADED WEIGHT (LBS)						STATIONARY OPERATION (feet)		
4 YARD DUMP TRUCK, SERVICE TRUCK, FLAT BED, ETC.		MINIMUM WEIGHT 15,000 LBS. (MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATION)						30 MIN.		
ROLL AHEAD STOPPING DISTANCE ASSUMES DRY PAVEMENT										
* A PROTECTIVE VEHICLE IS RECOMMENDED REGARDLESS IF A TMA IS AVAILABLE. IF NO TMA IS USED, THE PROTECTIVE VEHICLE SHALL BE STRATEGICALLY LOCATED IN THE FIELD TO SHIELD WORKERS AND NO ROLL AHEAD DISTANCE IS SPECIFIED.										

MINIMUM TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
	10	105	150	205	270	450	500	550	-	-
	11	115	165	225	295	495	550	605	660	-
	12	125	180	245	320	540	600	660	720	840

TYPICAL LANE CLOSURE WITH SHIFT TCD 3